



MARINE ENVIRONMENT PROTECTION
COMMITTEE
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Agenda item 4

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PREVENTION OF AIR POLLUTION FROM SHIPS

Review of MARPOL Annex VI and the NO_x Technical Code

Establishment of an informal Cross Government/Industry Scientific Group of Experts

Note by the Secretary-General

SUMMARY

Executive summary: This document seeks the Committee's endorsement of the Secretary-General's intention to establish an informal Cross Government/Industry Scientific Group of Experts to evaluate the effects of the different fuel options proposed during the revision of MARPOL Annex VI

Action to be taken: Paragraph 17

Related documents: BLG 11/16; MEPC 56/4/13 and MEPC 56/10/1

Background

1 The Secretary-General has been following closely developments within the Organization's efforts to revise MARPOL Annex VI and the NO_x Technical Code. In sharing his thoughts with the BLG Sub-Committee, at its eleventh session (16 to 20 April 2007), on how best to proceed in order to achieve the set aim in a balanced manner, he expressed the hope that instruments would be devised, which would not only address their objective efficiently and effectively, but would also contribute substantially to the overall efforts to minimize air pollution from all possible marine sources, while also addressing climate change issues; and would, thus, demonstrate the true and genuine concern of shipping about the atmospheric environment. He stressed that, in IMO's endeavours to achieve this, it was important not only to remain focussed on the desired goal but also to ensure that improvements in one area would not be compromised by negative impacts in others.

2 The Secretary-General added that it would be beneficial if the matter in hand were pursued in a comprehensive manner, by involving all interested parties (including oil producers and engine manufacturers); and that, by adopting an inclusive approach (engaging governments, industry and the scientific community), the "big picture" would be better and more readily understood by all concerned, thus enabling the MEPC to consider and adopt amendments which would be both workable and capable of achieving the agreed objectives. He went on to say that, because there were so many voices expressing a variety of positions coming from so many

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directions, he was of the view that the approach he had in mind would provide the Committee with the advice it needed to make balanced decisions, based on sound criteria, which would ensure practicable, workable and affordable solutions.

3 As announced at BLG 11, he is, therefore proposing the setting up of an informal Cross Government/Industry Scientific Group of Experts to undertake a comprehensive study (along terms of reference as proposed at annex) to **evaluate the effects of the different fuel options** proposed under the revision of MARPOL Annex VI. In so doing, the Secretary-General is keen to demonstrate the Organization's ability always to produce well worked out and timely results, when needed; and also that shipping is an environmentally-friendly and responsible industry.

4 The study will not aim at promoting any particular position; it should, instead, gather and present facts and data that will facilitate the Committee's decision-making process. As the revision of MARPOL Annex VI and the NOx Technical Code should be completed within the agreed timetable, it is, therefore, imperative that the study be finalized in time for the Committee to benefit from its outcome.

Scope of the study

5 It is not the intention that the Scientific Group of Experts undertakes a parallel process to the ongoing revision of MARPOL Annex VI and the NOx Technical Code by the BLG Sub-Committee and its subsidiary bodies. Instead, it should focus on reviewing the impact on the environment, on human health and on the shipping and petroleum industries, of applying any of the options identified as possible amendments to MARPOL Annex VI, concerning measures to reduce emissions from ships into the atmosphere.

6 Neither should the Scientific Group of Experts consider strategies for reducing NOx emissions, as further progress on this work is expected, pending the Committee's approval, to be made by the BLG Sub-Committee and its Working Group on Air Pollution; it should, however, study the effects of the proposed fuel options to reduce SOx and particulate matter generated by shipping and the consequential impact such fuel options could have on NOx and other emissions. Likewise, the control of volatile organic compounds (VOC) (also on the BLG Sub-Committee's agenda) should not form part of the Scientific Group of Experts' scope of work as this matter is not connected to the combustion of fuel oil and neither is it related to exhaust gas emissions.

Method and schedule of work

7 As stated above, the Scientific Group of Experts should carry out its assignment in such a manner as to ensure that the MARPOL Annex VI revision process is not delayed. Therefore and in order to make full use of the time available, the Group should avail itself of the results of studies and other scientific work already conducted; draw on expertise and validated data, as may be available from recognized independent scientific organizations; and take advantage of independent sources and international organizations, such as the United Nations Conference on Trade and Development, the International Energy Agency and others. Use of data from industry sources without independent scientific validation should be avoided or utilized with due caution, while transparency should be paramount throughout the process.

8 In this regard and as air pollution is closely related to human health, the Secretary-General has asked the World Health Organization (WHO) to contribute to the work of the Group of Experts so that its constituents can benefit from that Organization's expertise on matters concerning the impact of air pollution on human health, and from any other relevant scientific literature and reliable projections that WHO may recommend.

- 9 It is anticipated that the work of the Group will be divided in three distinct phases:
- .1 **Initial phase:** Collection of data by correspondence (followed by compilation and systematizing of the input by the Chairman and the Secretariat)
Timeline: Until mid-September 2007.
 - .2 **Analyzing phase:** Analysis of the data collected, during two meetings in London of two days each.
Timeline: First meeting – late September 2007
Second meeting – early November 2007
 - .3 **Report phase:** The reports of the two previous meetings, together with the final comments and input received through correspondence from the Group's members on the analysis and recommendations, will be considered and agreed, and the relevant report to BLG 12 and MEPC 57 approved, at a final two-day meeting in London.
Timeline: Final meeting – early December 2007
Report submitted to BLG 12 and MEPC 57 – one week after final meeting.

10 In connection with the timing of the Scientific Group of Experts' final report, it may be recalled that the BLG Sub-Committee has developed a revised work plan for the revision of MARPOL Annex VI and the NO_x Technical Code and has also requested the Committee to extend the target completion date for that work by one session, including the holding of an intersessional meeting of the Working Group on Air Pollution. If the Committee approves this proposed revised work plan, BLG 12 (scheduled to be held in early February 2008) may be tasked with finalizing the technical parts of the revision work; it would, consequently, be essential that BLG 12 be provided with the outcome of the Scientific Group of Experts' work in order to enable it to finalize the revision exercise within the approved timeframe. As foreshadowed in the preceding paragraph, therefore, the Group's report should be submitted concurrently to BLG 12 as well as to MEPC 57, under a relaxed deadline, for consideration and appropriate action. The Committee may, therefore, consider instructing BLG 12 to report its outcome on this issue to MEPC 57 as an **urgent matter**.

11 The Group's working language will be English; however, scientific reports and other submissions or input to the Group may be in any of the Organization's working languages.

12 Meetings of the Scientific Group of Experts will be accommodated at IMO's temporary headquarters in 55 Victoria Street in London.

Composition of the Group

13 In deciding on the composition of the Scientific Group of Experts, care will be exercised to ensure that it consists of a limited number of persons and is composed of members with appropriate expertise on matters within the scope of the study who, although nominated, as they may be, by Member Governments and industry/environmental organizations, will serve in their personal capacity.

14 In selecting the Group members, it will also be endeavoured that, to the extent possible, an equitable participation is achieved among various interested parties and geographical areas of the world.

15 The Secretary-General is grateful to Members who have offered to assist the Group, and would encourage those who may not be included in its composition – because of the need to keep its membership to the minimum possible and owing to the tight timetable and the limited facilities at the Organization's temporary headquarters – but feel that they may contribute to the Group's task, to provide scientific support in areas of their expertise.

Costs and funding

16 In order to enable work on data verification and collection to start as soon as possible, the Secretary-General has made available an initial contribution of US\$20,000 from the balance of funds from the Onassis International Prize for the Environment awarded to the Organization in 1997. Because of additional funding, which is anticipated to be required to enable the Group to accomplish its mandate in a timely manner, the Secretary-General has called upon Members and organizations to contribute to such funding and is grateful to those who have already responded to his request.

Action requested of the Committee

17 The Committee is invited to:

- .1 endorse the course of action proposed by the Secretary-General to establish an informal Cross Government/Industry Scientific Group of Experts with terms of reference as indicated in the annex;
- .2 approve a relaxed deadline for submission of the Scientific Group of Experts' report to both BLG 12 and MEPC 56; and
- .3 include the revision of MARPOL Annex VI and the NO_x Technical Code among the urgent matters emanating from BLG 12 to be considered by MEPC 57.

ANNEX

**INFORMAL CROSS GOVERNMENT/INDUSTRY SCIENTIFIC GROUP OF EXPERTS
TO EVALUATE THE EFFECTS OF THE DIFFERENT FUEL OPTIONS
PROPOSED UNDER THE REVISION OF MARPOL ANNEX VI**

PROPOSED TERMS OF REFERENCE

1 The scope of the study is to review the impact on the environment, on human health and on the shipping and petroleum industries, of applying any of the options identified as possible amendments to MARPOL Annex VI to introduce measures aiming at reducing emissions from ships into the atmosphere.

2 The study will be conducted by a group of selected members, nominated by Member Governments and industry organizations, with appropriate expertise on matters within the scope of the study, who, in the discharge of their duties, will serve the group in their personal capacity. Although the experts as members of the group will be expected to assist in its deliberations independent of the entities nominating them, they may draw on the expertise of others, as it may be necessary, to fulfil their task.

3 While aiming at addressing issues as specified in paragraph 1, the study will specifically address the effects of the proposed fuel options to reduce sulphur-oxides (SO_x) and particulate matter (PM) emissions generated by shipping, as well as the consequential impact such emission reductions may have on others (e.g. carbon-dioxide (CO₂)) resulting from changes in the refining industry that may be necessary to meet potential new MARPOL Annex VI requirements.

4 The end result, aimed at assisting the MEPC to make well-informed decisions, should be an objective study containing facts and data and specifying the pros and cons of any proposed solution. Thus, the study, while refraining from making comments, which might jeopardize the impartial and objective character of the exercise, should not make recommendations on policy issues, leaving them to MEPC to make when weighing up the outcome of the study.

5 Within the above remit, the Group should:

.1 ***assess:***

- .1.1 the number of ships in the world fleet to which the amended MARPOL Annex VI will apply, distributed by gross tonnage and installed power;
- .1.2 the total volume of bunkers being consumed by international shipping at present, showing the proportion of distillate and residual fuels;
- .1.3 the predicted fuel and emission trends leading to 2020, based on current MARPOL Annex VI regulations;
- .1.4 any other relevant trends in the global fuel markets and the world fleet leading up to 2020; and
- .1.5 the incidence and trend of emission-reduction measures already adopted voluntarily by the shipping industry;

.2 *evaluate:*

- .2.1 the repercussions for the relevant industry sectors (shipping, petroleum, bunkering, engine and equipment manufacturers) resulting from the application of those options requiring the use of specific fuels, with a view to ascertaining the feasibility of these approaches in terms of global availability of the fuels in question;
- .2.2 where applicable, the related future capacity for the production of marine engines and relevant abatement technologies;
- .2.3 the implications arising from various proposed implementation dates (e.g. 2012, 2015, 2018, etc.), taking into account commercial considerations for different trades and segments of the shipping industry; and
- .2.4 the relevant safety and operational aspects;

.3 *assess:*

- .3.1 the impact on human health and the environment associated with the scenarios identified in subparagraph .2, with regard to SO_x and PM emissions from ships and consequential impact on other emissions, such as nitrogen-oxides (NO_x); and
- .3.2 the waste associated with production and operation of abatement technologies;

.4 *assess* the consequential impact on CO₂ emissions from ships and refineries taking into account the availability of CO₂ abatement technologies; and

.5 *present* its conclusions in a written report to BLG 12 and MEPC 57, to be submitted by mid-December 2007.
